Validity of *Homalodisca* and of *H. vitripennis* as the Name for Glassy-Winged Sharpshooter (Hemiptera: Cicadellidae: Cicadellinae)

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ABSTRACT A male of *Tettigonia vitripennis* Germar—deposited in the recently rediscovered Germar Hemiptera collection, in the Ivan Franko National University (Ukraine)—is designated as the lectotype and assumed to be erroneously labeled as from Brazil. *Homalodisca vitripennis* is considered a senior synonym of *Tettigonia coagulata* syn. nov. and therefore should be used as the scientific name for the glassy-winged sharpshooter, a major vector of the bacterial Pierce's disease of grapes, phony peach disease, plum leaf scald, and oleander leaf scorch in southern United States and northern Mexico. The previously designated type species of *Homalodisca* Stål, *Cicada triquetra* F., was found to be mistaken by Stål for *C. triangularis* F., which is herein fixed as the new type species of this economically important genus. *Propetes triquetra* comb. nov., previously known only from an unknown locality in South America, is newly recorded from Brazil (Mato Grosso and Pará states).

RESUMO: Um espécime macho de *Tettigonia vitripennis* Germar—depositado na coleção de Hemiptera de Germar previamente considerada perdida, mas recentemente localizada na Universidade Nacional de Ivan Franko (Ucrânia)—é aqui designado como lectótipo e considerado erroneamente etiquetado como coletado no Brasil. *Homalodisca vitripennis* é considerada o sinônimo sênior de *Tettigonia coagulata* syn. nov., consequentemente tal nome científico deve ser utilizado para designar a "glassy-winged sharpshooter" [= cigarrinha de asas vítreas], o principal vetor de doenças bacterianas de uvas, pêssegos, ameixas e *Nerium oleander* (L.) no sul dos Estados Unidos e norte do México. A espécie-tipo de *Homalodisca* Stål designada previamente, *Cicada triquetra* F., foi identificada erroneamente por Stål pela espécie *C. triangularis* F., a qual é aqui fixada como a nova espécie-tipo desse gênero. *Propetes triquetra* comb. nov., conhecida previamente somente de uma localidade não especificada na América do Sul, é aqui registrada pela primeira vez para o Brasil (Mato Grosso e Pará).

KEY WORDS *Homalodisca coagulata*, glassy-winged sharpshooter, *Xylella fastidiosa*, Pierce's disease, *Propetes*

Sharpshooters are members of the cosmopolitan leafhopper subfamily Cicadellinae, which contains >2,600 species among 372 genera. Fifty-eight of these genera, and >400 species, belong to the New World tribe Proconiini (Young 1968, Cavichioli and Sakakibara 1989, Godoy 2005, Rakitov and Godoy 2005). Among the most economically important proconiine genera is *Homalodisca* Stål, 1869, which was not properly redescribed until the revision of Young (1968) of Proconiini. Young (1968) included 19 valid species in *Homalodisca* distributed from the United States to southeastern Brazil and Paraguay, making four new synonymies and describing three new species. In addition, he noted that *Homalodisca* was closely related to *Phera* Stål, 1864; *Dichrophleps* Stål, 1869; *Oncometopia* Stål, 1869; and *Propetes* Walker, 1851. Since the revision of Young (1968), only a single published work included taxonomic changes to this economically important genus. Burks and Redak (2003) transferred *Phera lacerta* Fowler, 1899 back to its original genus and reinstated Young's junior synonym *Homalodisca liturata* Ball, 1901, as the valid name for the species occurring in Mexico and the United States (California and Arizona) commonly referred to as the smoketree sharpshooter.

Four *Homalodisca* species occur in the southern United States, and three of these species are known vectors of the bacterium *Xylella fastidiosa*, which causes millions of dollars of damage in fruit and horticultural crops (Nielson 1968, Redak et al. 2004). The glassy-winged sharpshooter transmits the bacterium to grapevines causing the lethal Pierce's disease, virtually precluding viticulture in the southeastern United States and northeastern Mexico (Almeida and Purcell 2003, Redak et al. 2004). In addition, this spe-

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cies can transmit this bacterium to peach, plum, and nectarine trees and to the ornamental *Nerium oleander* (L.) (Turner and Pollard 1959, Purcell et al. 1999, Costa et al. 2000, Redak et al. 2004). Among other North American *Homalodisca*, *Homalodisca insolita* (Walker 1858) is a vector of phony peach disease and the smoketree sharpshooter is a vector of Pierce's disease and oleander leaf scorch, the latter especially in drier areas of southern California where this sharpshooter is most abundant (Freitag et al. 1952, Turner and Pollard 1959, Blua et al. 2001). Elsewhere, only *Homalodisca ignorata* Melichar, 1924 is a proven vector of *X. fastidiosa* to oranges and coffee in southeastern Brazil, causing citrus variegated chlorosis and coffee leaf scorch, respectively (Marucci et al. 2001, Yamamoto et al. 2002, Redak et al. 2004). However, not only can *X. fastidiosa* infect many other plant species but also sharpshooter vectors tend to be polyphagous, e.g., the glassy-winged sharpshooter has been associated with >100 host species (Turner and Pollard 1959, Hoddle et al. 2003), increasing the potential economic impact of the genus *Homalodisca.*

As part of an extensive program by United States and California governmental agencies combating Pierce's disease, a revision of the genus *Homalodisca* is underway. The identity of the genus is of primary importance and it is necessarily tied to its type species. In this article, we provide evidence that the previously designated type species of *Homalodisca* was erroneously identified by Stål (1869), and to maintain stability of nomenclature, we fix the identity of the type of the genus and establish the valid name of the economically important glassy-winged sharpshooter based on the lectotype specimen. This new fixation facilitates retention of *Homalodisca* as a valid genus, despite the transfer of the previously designated type species, *Cicada triquetra* F., 1803, to the genus *Propetes.* Additionally, the rediscovery of the allegedly "lost" Hemiptera collection of Ernst F. Germar at the Ivan Franko National University (Lviv, Ukraine) permitted the designation of a lectotype for *Tettigonia vitripennis* Germar, 1821. *Homalodisca vitripennis* is a subjective senior synonym of *Tettigonia coagulata* Say, 1832, thus becoming the valid name for the glassy-winged sharpshooter. With the spread of Pierce's disease in California vineyards, the glassy-winged sharpshooter and other *Homalodisca* species are receiving an unprecedented level of research. Despite the grave nature of changing the scientific name of such an economically important species, it is necessary from a nomenclatural standpoint and such changes should be made sooner rather than later.

Materials and Methods

Studied specimens are deposited in the following collections: American Museum of Natural History, AMNH (New York, NY); California Academy of Sciences, CAS (San Francisco, CA); Center for Biodiversity, Illinois Natural History Survey, INHS (Champaign, IL); Department of Entomology, Texas A & M University, TAMU (College Station, TX); Department of Entomology and Applied Ecology, University of Delaware, UDCC (Newark, DE); Museu Paraense Emílio Goeldi, MPEG (Belém, Brazil); Department of Entomology, The Natural History Museum, BMNH (London, United Kingdom); United States National Museum of Natural History, USNM (Washington, DC); Museum and Institute of Zoology, Polish Academy of Sciences, MZPW (Warsaw, Poland); and Department of Zoology, Ivan Franko National University, IFNU (Lviv, Ukraine).

In quoting label data of type material, a vertical line (|) separates lines on a label. Techniques for preparation of genital structures are those of Oman (1949) and parts are stored in microvials with glycerin. Drawings of genitalia structures of *H. vitripennis* were based on photographs and pencil sketches made during the visit to IFNU.

Homalodisca Stål

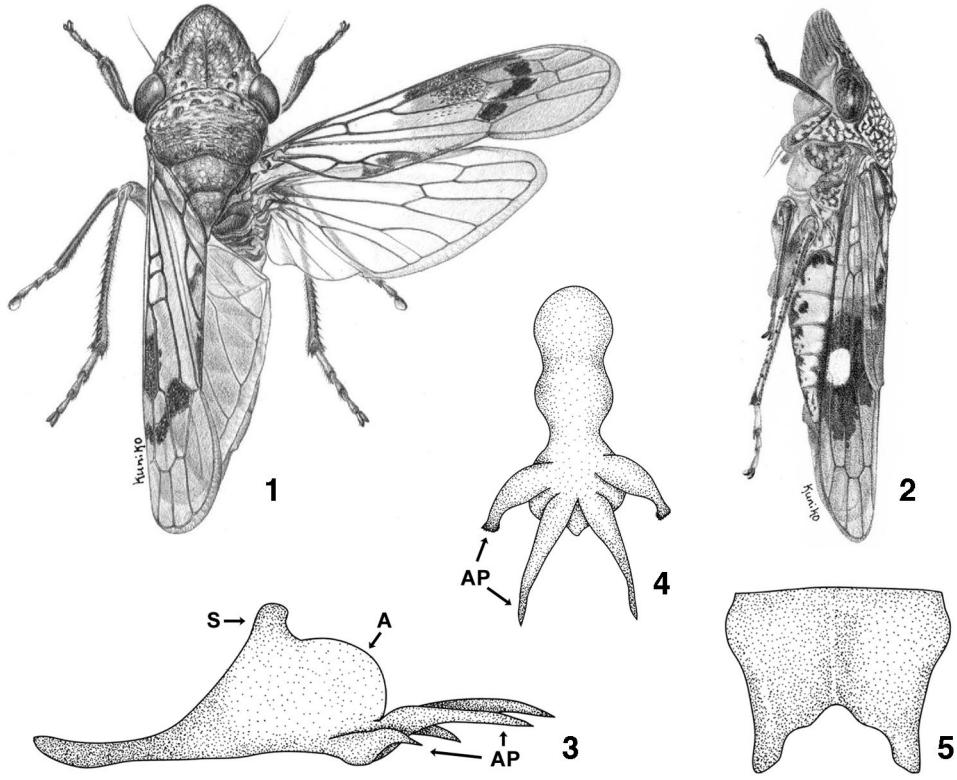
Figs. 1–7

Homalodisca Stål 1869: 63.

Type Species. *Cicada triangularis* F., 1803: 63.

New designation. *C. triangularis* was misidentified by Stål (1869) as *C. triquetra* F., 1803: 63. *C. triangularis* (preoccupied) was replaced by *Homalodisca fabricii* Metcalf, 1965: 501, which was considered by Young (1968) to be a junior subjective synonym for *H. lucernaria* (L., 1758): 434.

Stål (1869) erected the genus *Homalodisca*, including *C. triquetra* and *C. triangularis* F., 1803, which he redescribed based on Fabricius' type specimens. In a footnote in the same article, Stål also included *Proconia admittens* Walker, 1858 and *Tettigonia coagulata* in *Homalodisca.* Distant (1908) subsequently designated *C. triquetra* as the type species, meeting the requirements of the current ICZN (1999) (Articles 67.2, 67.4, and 69.1). Unfortunately, Stål (1869) apparently interchanged the descriptions of *C. triquetra* and *C. triangularis* in his manuscript. The description of Fabricius (1803), although short, states clearly that *C. triquetra* is black and has fuscous hyaline forewings without markings (Fig. 9), whereas Stål (1869) described the species as mostly brown mottled with yellow with forewings hyaline with a dark costal macula (as in Fig. 1). The latter description fits *C. triangularis* (now correctly referred to as *H. lucernaria*), the other Fabrician species upon which Stål's genus description was based, not only in the external characters and color pattern but also in the shape of the female sternite VII, which was not mentioned previously by Fabricius (1803). At the same time, Stål's redescription of *C. triangularis* approximated the original description of *C. triquetra*, and, perhaps most importantly, emphasized the basally constricted abdomen, a character shared by *C. triquetra* with other *Propetes* species (Fig. 10; see notes below), but not present in *Homalodisca.* Furthermore, although Fabricius (1803) did not mention the gender of the specimens studied, the descriptions of Stål (1869) indicated that he studied one or more males

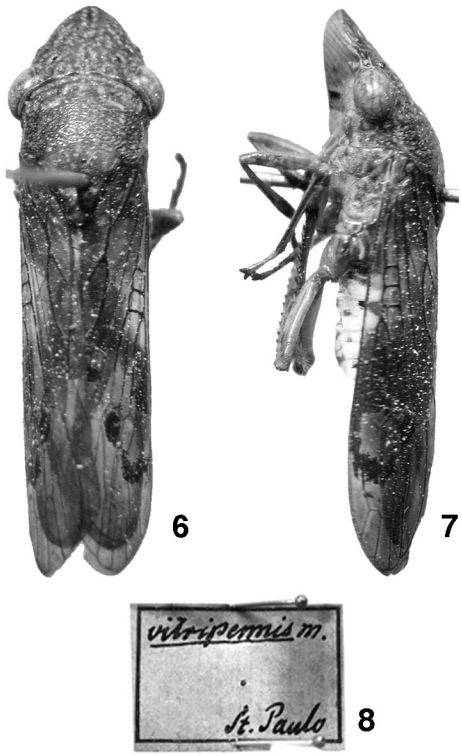


Figs. 1–5. Glassy-winged sharpshooter, *H. vitripennis* (Germar). (1) Dorsal habitus, female, USNM. (2) Lateral habitus, female, USNM. (3) Aedeagus, lateral view, lectotype, IFNU. (4) Aedeagus, ventral view, lectotype, IFNU. (5) Abdominal sternite VII in situ, ventral view, female paralectotype, IFNU. A, aedeagal atrium; AP, atrial processes; S, aedeagal shaft.

of "*C. triangularis*" and more than one female of "*C. triquetra*" from the Fabricius collection. Females of *C. triquetra* are not known (see below) and according to Young (1965), there is only one male specimen of *C. triquetra* in the Fabricius collection (designated as the lectotype). Together, the aforementioned comments are consistent with only one conclusion: that Stål's description of "*C. triquetra*" actually refers to *C. triangularis.* Nevertheless, it warrants mention that Young (1965) noted that out of four specimens of *C. triangularis* in the Fabricius collection, at least one specimen is a male, a point not noted by Stål (1869), who may have mistaken males for females, a possibility corroborated by the unusually large body size range Stål gave ("Long. 11.5–14") in his "*C. triquetra*" description.

An early entomologist in possession of Stål is (1869) work, of which the generic key was translated into English by Dallas (1870), but not familiar with the original species descriptions by Fabricius (1803) would almost certainly identify a glassy-winged sharpshooter or any similar *Homalodisca* as *H. triquetra.* Erroneous use of the name *H. triquetra* as applied to North American species dates back to Weed (1892), who recorded this species from Mayersville (MS). Weed (1892) mentioned being in contact with Dr. Van Duzee, who most probably played a role in identifying his specimens as *C. triquetra.* Two years later, Van Duzee (1894) in his catalog of North American jassoids, recorded *C. triquetra* from Mexico and the United States and ignored that this species was originally described from South America. These previous accounts consisted only of taxonomic lists, until Ball (1901) redescribed and illustrated what seemed to be glassy-winged sharpshooter specimens and perhaps its close relative *H. ichthyocephala*, under the name *H. triquetra.* Following Ball (1901), the name *H. triquetra* was widely accepted by authors erroneously for the glassy-winged sharpshooter (e.g., Lawson 1920, DeLong 1948, Oman 1949, Metcalf 1965), including Distant (1908), who designated *C. triquetra* as the type species for *Homalodisca.* It was only after Schröder (1957) redescribed and illustrated the genitalia of *C. triquetra* based on its lectotype (Fig. 9) that the identity of this species was clarified (see below). Young (1958) reviewed the species of *Homalodisca* in the United States, widely publicizing the discovery of Schröder (1957) and reinstating *H. coagulata* as the valid name for the glassy-winged sharpshooter. This name was accepted and has been in use by virtually all of the many researchers on the glassy-winged sharpshooter, but it must now be synonymized under *H. vitripennis* (see below).

By interchanging the descriptions of the two Fabrician species upon which he based his original description of *Homalodisca*, Stål (1869), in effect, mis-



Figs. 6–8. *H. vitripennis.* (6) Dorsal habitus, male lectotype, IFNU. (7) Lateral habitus, male lectotype, IFNU. (8) Original green label handwritten by E. F. Germar associated to lectotype, IFNU.

identified both species, one of which, *C. triquetra*, was later designated by Distant (1908) as the type species of the genus. In the case of misidentification of a type-species, the ICZN (1999) allows an author to select and fix as type species either the "nominal species previously cited as type-species" (Article 70.3.1) or the "taxonomic species actually involved in the misidentification" (Article 70.3.2). In this case, stability and universality of nomenclature are best served by using the second option, because the first option would require sinking *Homalodisca* as a junior synonym under *Propetes* and the proposal of a new genus to receive the glassy-winged sharpshooter and all other species currently placed in *Homalodisca.* Thus, we hereby fix *C. triangularis* F. (=*C. triquetra* sensu Stål 1869) as type species of *Homalodisca* under Article 70.3.2 of the Code (ICZN 1999). *C. triangularis* is a junior synonym of *H. lucernaria.*

Homalodisca vitripennis (Germar)
Figs. 1–7

Tettigonia vitripennis Germar, 1821: 61.
Tettigonia coagulata Say, 1832: 13. New synonymy.

Type Locality. Unknown. The species is distributed in the southeastern United States and northern Mexico; introduced to California, Hawaii, and French Polynesia. The lectotype was erroneously labeled as being from São Paulo, Brazil.

Length of Lectotype. 12 mm (including forewings in repose).

Previous attempts to locate the Hemiptera collection of Ernst F. Germar, which housed specimens eligible to be primary types of *H. vitripennis*, were unsuccessful (Schröder 1957: 257; Young 1968: 2). Schröder (1957) described and illustrated the common Central and North American *Homalodisca* species, *H. ichthyocephala* (Signoret, 1854) and reluctantly considered it to be conspecific with *H. vitripennis* based on the short original description (Germar 1821). Later, Young (1968) rejected this proposal based on no species of the genus having a range that includes both Brazil and Central America, which left the identity of *H. vitripennis* in doubt. The Germar Hemiptera collection, however, has not been lost and as correctly indicated previously (Schröder 1957, Horn et al. 1990), it was kept in "Lemberg," now known as Lviv in Ukraine. This collection has been recently made accessible at the Ivan Franko National University of Lviv. A recent visit by the senior author to this collection made possible the study of a male and a female identified as *H. vitripennis* by Germar (Fig. 8). The handwriting on these specimens' labels is Germar's (compare with Horn et al. 1990: plate 37, fig. 36) and the specific epithet is followed by "m.," an abbreviation of *mihi* (=I, me), referring to himself as the author of the species. There is no reason to believe that these specimens of *H. vitripennis* were mislabeled after Germar's study, because the external morphology of both specimens and the type locality on the label (São Paulo) agree with the original description (Germar 1821: 61). The original description of *H. vitripennis*, however, was based only on external morphological characters, and there are no other sharpshooters in that collection that would agree with it (D.M.T., unpublished data). Furthermore, that another male and female of *H. vitripennis* from "Carolina" were added to the collection, most probably after work of Germar (1821) (labeled "vitripennis Gr"), is evidence that whoever worked on that collection tried to keep the original disposition intact. Therefore, the two specimens erroneously labeled as being from Brazil are viewed as syntypes, and the male specimen is herein designated as the lectotype for *Tettigonia vitripennis* Germar, 1821, the female specimen consequently becomes a paralectotype (ICZN 1999: Article 74.1.3). The taxonomic purpose of designating a lectotype for *T. vitripennis* is to ensure a correct and consistent application of this name, associated with a specimen, to promote nomenclatural stability. Other sharpshooter specimens found in this collection will be designated as primary types individually for other species in a future article (D.M.T., in preparation).

Based on the study of external and male genitalic characteristics, no Brazilian (or South American) species closely resemble *H. vitripennis*, which is, indeed, conspecific with *H. coagulata.* According to the principle of priority (ICZN 1999: Article 23), *H. vitripennis* is the oldest valid name and therefore has priority over

H. coagulata. This precedence may only be reversed if two conditions are met (ICZN 1999: Article 23.9.1): 1) if the junior synonym has been used as a valid name in at least 25 works, published by at least 10 authors, and encompassing a span of not <10 yr in the last 50 yr; and 2) if the senior synonym has not been used as a valid name after 1899. For *H. vitripennis* versus *H. coagulata*, the first condition is met but not the second. *H. coagulata* has been used as the valid name for the glassy-winged sharpshooter since the revision of Young (1958) of North American *Homalodisca*, and, just in the last 25 yr, at least 53 journal articles with 33 different primary authors were published using the junior synonym (Biological Abstracts search for "coagulata"). Nevertheless, *H. vitripennis* has been used as a valid name after 1899. *Homalodisca vitripennis* was listed in the catalog of Homoptera of Metcalf (1965), but not as valid name, because it was erroneously considered by many American authors as a junior synonym of *C. triquetra* (Young 1958). However, Schröder (1957) did consider *H. vitripennis* a valid name, although he misdetermined it, and Young (1968) included *H. vitripennis* as a valid species in *Homalodisca,* even though he did not see the type specimen or have any idea of its true specific identity.

An older name may be suppressed even when both aforementioned conditions are not met by referring the matter to the International Commission of Zoological Nomenclature (ICZN 1999: Article 23.9.3). The authors are not taking this course of action because the use of the older synonym is not considered a threat to universality or stability. The scientific community working on economically important sharpshooters is very cohesive and in less than a year embraced the revalidation of *H. liturata* as the valid name for the smoketree sharpshooter (Burks and Redak 2003). More importantly, accepting *H. vitripennis* as the valid name for the glassy-winged sharpshooter is a major step toward stability because it is represented by a primary type specimen, whereas the type of *H. coagulata* has been lost. Apart from 770 noncicadellid specimens currently deposited at the Museum of Comparative Zoology (Harvard University, Cambridge, MA), the Thomas Say Entomological Collection is assumed to have been destroyed (Mawdsley 1993) and with it specimens of *T. coagulata* eligible to become primary types. So far, no neotype has been designated for this species.

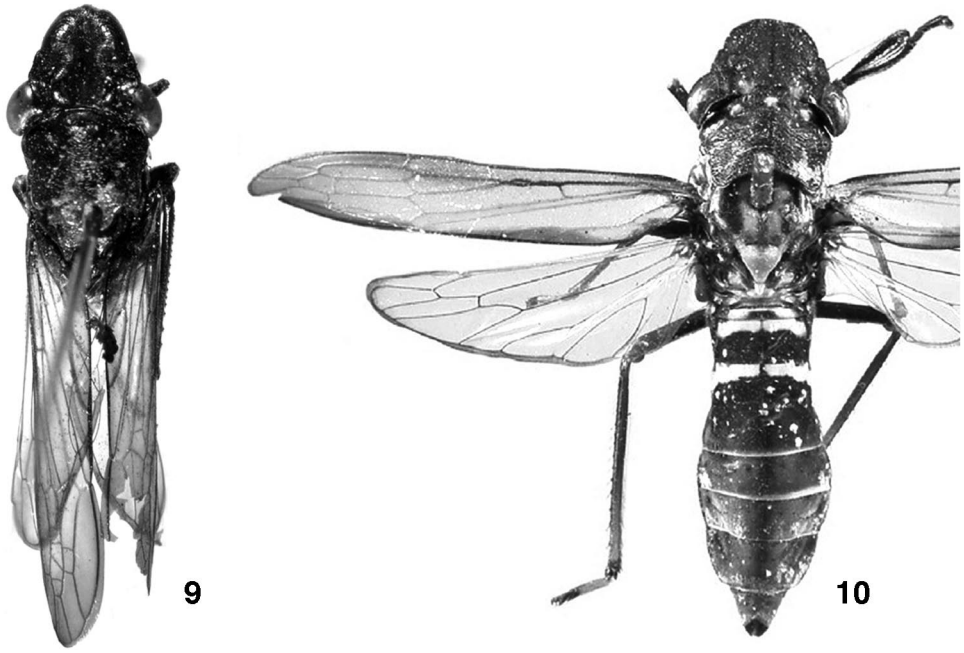
The erroneous labeling of locality, as happened with the lectotype of *H. vitripennis*, is a problem fairly common in old collections (for more examples in leafhopper collections, see Mejdalani et al. 2000, Takiya and Cavichioli 2004, Takiya and Mejdalani 2004). The glassy-winged sharpshooter is native to the southeastern United States and northern Mexico. Say (1832) described the junior synonym, *T. coagulata*, from Louisiana and the species has been recorded subsequently from an unknown locality in Mexico and the U.S. states of Alabama, Arkansas, Florida, Georgia, Mississippi, Missouri, North Carolina, South Carolina, Texas, and Wisconsin (Young 1958, Turner and Pollard 1959). It is herein newly recorded from San Luis Potosí State in Mexico. Recently, the glassy-winged sharpshooter expanded its range to California in 1989, Tahiti and Moorea in 1999, and Hawaii in 2004 (Sorensen and Gill 1996, Heu et al. 2004).

Taxonomic Notes. *H. vitripennis* can be easily distinguished from other *Homalodisca* species by its 1) brown dorsum mottled with yellow (Figs. 1 and 6), 2) mesoscutellum concolorous with mesoscutum (Figs. 1 and 6), 3) forewings mostly membranous (Figs. 1 and 2, 6, 7), 4) female hindtibiae with less than five modified apical setae in anteroventral row (Rakitov 2004: fig. 11L), 5) first and second visible abdominal tergites with tan-to-yellow lateral maculae much larger than those on remaining posterior tergites (Fig. 2), 6) aedeagus without conspicuous concavity between atrium and shaft (Fig. 3), and 7) aedeagal atrium with two pairs of processes (Figs. 3 and 4).

H. vitripennis has the aedeagal atrium processes (Figs. 3 and 4, AP) variable in their shape and especially in orientation (see Young 1958: plate I), the latter because of having a weakly sclerotized base. The lectotype has both pairs of processes (Fig. 3, AP) directed posteriorly, in lateral view at an approximately right angle to the shaft (Fig. 3, S), but other males have the dorsal pair of processes directed dorsally (in lateral view parallel to the shaft). Both forms, and intermediates, are often found coexisting at the same locality studied herein from various localities in the United States. Intraspecific variation in the shape and length of aedeagal atrium processes is common in related proconiine genera, such as *Molomea* China, *Oncometopia* Stål, and *Pseudophera* Melichar.

Type Material. LECTOTYPE: one male, green label on drawer "vitripennis m. | St. Paulo", label on pin "ΕΓ p477", IFNU.

Material Examined. BRAZIL (erroneous record): São Paulo: one female paralectotype, same data as lectotype, IFNU. MEXICO: San Luis Potosí: one male, 122 m, Tamazunchale, XI-1954, N.L.H. Krauss, USNM; three females, two males, same as preceding except, 15-VII-1963, Duckworth & Davis, three females, three males, same as preceding except, 2-VIII-1963, Duckworth & Davis, USNM. U.S.A.: ALABAMA: one male, Montgomery County, Montgomery, Picket Springs, 05–06-VIII-1916, AMNH; one male, Dallas County, Hazen, 28-I-1921, L. B. Woodruff, AMNH; CALIFORNIA: three males, Ventura County, Fillmore, 6-V-1998, R. Rakitov, on *Ulmus* sp., INHS; FLORIDA: two males, Fort Myers, one at 25- and other at 27-VII-1957, J. C. Denmark, INHS; two males, Leesburg, 30-XI-1955, L. H. Stover, at *Vitis*, INHS; two males, Gainesville, 27-VI-1964, F. W. Mead, light, INHS; GEORGIA, one male, Wayne County, Jesup, 3-XI-1968, Davidson, USNM; LOUISIANA: one male and one female, Iberville Parish, Bayou Paul, 21-VII-2003, C. R. Bartlett, UDCC; three males, East Baton Rouge Parish, Baton Rouge, nr. LSU Campus, 20-VII-2003, Hg vapor light, UDCC; one male, East Baton Rouge Parish, Baton Rouge, 01-IX-95, M. G. Karge, UDCC; one male, Tangipahoa Parish, Arcola, 07-IX-2002, Mumma, sweeping, UDCC; one male, Bossier Parish, Benton hunting lease, 04-VII-2003, K. E. Landry, sweeping, UDCC; one male, Franklin County, 12-VI-1963, D. R. Whitehead,



Figs. 9–10. Dorsal habitus of type-specimens of *Propetes* Walker species. (9) Male lectotype (abdomen detached) of *P. triquetra* (Fabricius), comb. nov., University of Copenhagen. (10) Female holotype of *P. compressa* Walker, BMNH.

USNM; MISSISSIPPI: three males, Yazoo County, 14-IX-1972, J. M. McWilliams, INHS; TEXAS: two males, Brownsville, 24-VI-1908, light, INHS; one male, Brownsville, 09-XII-1910, sweeping, INHS; one male, Brownsville, 8-V-1967, A. Blanchard; USNM; two males and two females, Brazos County, nr. Millican, 7-VI-1980, S. J. Merritt, on *Helianthus* sp., TAMU; one male, Brazos County, Highway 30, 9.1 miles east of junction with Highway 6, 7–8-VI-1980, S. J. Merritt, on *Helianthus* sp., TAMU; STATE UNKNOWN: one male and one female, "Carolina", IFNU.

Propetes Walker
Figs. 9 and 10

Propetes Walker, 1851: 797.

Type Species. *P. compressa* Walker, 1851, by monotypy.

Young (1968) included two valid Brazilian species in the rare genus *Propetes:* the type species *P. compressa* Walker, 1851, recorded from Amazonas, Mato Grosso, and Pará states; and *P. schmidti* Melichar, 1925, recorded from Mato Grosso do Sul and São Paulo states. Young (1968) also studied specimens of a possibly undescribed species from Guyana. Species of *Propetes* can be easily distinguished from other proconiines by the following characteristics (Takiya et al. 1999): 1) head with median longitudinal carina on transition crown-frons (Fig. 9), 2) pronotum with transverse sulcus anteriorly (Figs. 9 and 10), 3) mesoscutellum swollen (Fig. 10), 4) forewings hyaline (Figs. 9 and 10), and 5) abdomen strongly constricted basally (Fig. 10). The last three morphological characteristics, along with the color pattern consisting of black and yellow, have been associated in *P. schmidti* with mimicry of epiponine wasps (Takiya et al. 1999).

Propetes triquetra (Fabricius), comb. nov.
Fig. 9

Cicada triquetra Fabricius, 1803: 63. [nec *Cicada triquetra* sensu Stål, 1869]

Type Locality. South America.

The study of a photograph of the lectotype deposited at the University of Copenhagen (Fig. 9, Copenhagen, Denmark) and two additional males of *C. triquetra* confirms that this species, having all aforementioned genus characteristics, pertains to *Propetes.* Previously, Young (1968) realized that this species probably belonged to *Propetes,* but because *C. triquetra* was designated as the type species of *Homalodisca* and he thought that proper placement would lead to a generic synonymy, he chose not to take action at that time. Having newly fixed the identity of the type species of *Homalodisca* as *C. triangularis,* we herein transfer *C. triquetra* to *Propetes* without any change in status of the genera involved. *Propetes triquetra,* comb. nov., was described from an unknown locality in South America (Fabricius 1803) based on material collected by Smidt. According to Stål (1869: 3), Smidt's material was most probably collected in Guyana (Essequibo and Demerara); therefore, *P. triquetra* is herein newly recorded from Brazil (Mato Grosso and Pará states).

Taxonomic Notes. The male lectotype of *P. triquetra* (Fig. 9) was redescribed and illustrated by Schröder

(1957) and Young (1968). Males of this species can be easily distinguished from males of the only other *Propetes* with known males, *P. schmidti*, by their 1) crown and pronotum completely black without yellow markings (Fig. 9), 2) membranous connection between the aedeagal shaft and atrium (Young 1968: Fig. 180f), and (3) three pairs of atrial processes (Young 1968: Fig. 180f). Females of this species are still unknown. Similarly, *P. schmidti* was only known from males until Takiya et al. (1999) discovered that females have a strikingly different color pattern than males, making the genders difficult to associate. Although sexual dimorphism in the color pattern of sharpshooters is uncommon, it is possible that females of *P. triquetra*, when discovered, will differ from the mostly black males.

Material Examined. BRAZIL (New Country Record), Mato Grosso: one male, Barra do Tapirapé, 1-I-63, B. Malkin, CAS (compared with type by D. A. Young); PARÁ: one male, Serra Norte, Caldeirão, 27-X-84, M. Zanuto, MPEG.

Comparative Material Examined

***Propetes compressa* Walker.** HOLOTYPE: one female, "Type", "I. Propetes compressa", "Para", "294", BMNH.

***Propetes trimaculata* Schmidt, 1928** (=jun. syn. of *P. compressa*). LECTOTYPE: one female, "Cuyabá | Matto [sic!] Grosso", "Typus", "Propetes | trimaculata Schmidt | Edm. Schmidt | determ. 1928", "Mus. Zool. Polonicum | Warszawa 12/45", "Lecto- | typus", MZPW.

Conclusions

Name changes of well-known species are never comfortable to adopt at first. They require a change in vocabulary by those who need taxonomy to communicate about a handful of species with which they personally deal. It is only in recognition of the vast number of species needing classification that the application of a consistent set of international rules can be fully appreciated and respected despite its inconveniences. For a useful perspective on name changes by nontaxonomists, it is worth reiterating that until the work of Schröder (1957) and Young (1958), the glassy-winged sharpshooter was comfortably being referred to as *H. triquetra.* Because of the discovery of a type specimen, the scientific name has necessarily changed again, this time from *H. coagulata* to *H. vitripennis;* the common name remains the same for day-to-day communication. We think the name established in this paper now provides a stable, well justified new classification.

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